elements which are absolutely essential to her economic existence. In this new phase of reasoning, it is evident that other interests than those of the Ukraine intervene, and one can easily detect the Russian point of view. However, in our present study of the subject, let us lay aside all thought of any ulterior motive on the part of our adversaries, and approach the matter in an objective manner, in order to discern, if possible, the vital economic interests of the Russian people which might suffer through the creation of an independent Ukraine.

Is Great Russia Economically Dependent on Ukraine?

Concisely stated, the three fundamental bases of opposition usually put forward are:

1. The Ukraine is the granary of Russia. Without Ukraine, upon which she depended for her entire supply of agricultural products, Russia would suffer from hunger.

2. The Ukraine separates Russia from the Black Sea and the Sea of Azov, thus closing the door to foreign markets.

3. If the Ukraine were established in ethnographic limits, she would thus possess nearly all the coal and iron of the old Russian Empire, and hence would cut off Russia's present supply of these indispensable raw materials of industry.

Let us candidly and thoroughly examine each of these arguments.

In the first place, statistics show that Ukraine has always been the granary for western Europe rather than for Russia and has, in fact, exported only a very small per cent of her cereal products into Russia. The latter, furthermore, possessed such an excess of grain that she herself has exported in the past, and still continues to export, an appreciable quantity of cereals.

Great Russia's Own Grain Supply Ample

For the years 1909-1911, during which time the exports were especially large, the total quantity of cereals shipped from former Russia averaged 440,000,000 bushels each year. Of this amount the nine Ukrainian governments

supplied 201,670,000. If we now add to these nine governments the Kuban, the Ukrainian region north of the Caucasus, as well as the Ukrainian parts of other governments which border them, we must increase these figures by 91,670,000, which gives to ethnographic Ukraine an exportation of about 293,340,000 bushels of cereals. During this time the other parts of former Russia, including Siberia, exported about 40,000,000 bushels annually. As neither Poland nor Finland exported cereals, and Lithuania and the Baltic provinces only small quantities, if any, it was Russia proper that had the large excess.

As to the Ukraine, her exportations of cereals to Russia did not reach more than 10 to 15 per cent of her total export; that is to say, about ~~six or seven~~ 35 million bushels, and nearly all of that was destined for Poland, Lithuania and White Russia, Great Russia consuming only a small fraction of the amount. Then, too, the Ukrainian wheat has always had as a competitor in the markets of Moscow and Petrograd the wheat from the fields of Siberia and the regions of the Volga.

If hunger now exists in Russia, it is due to a dreadful crisis in transportation, to which may be added the fact that Siberia and some parts of the Volga regions refuse their wheat to Russia in the present Bolshevist state and, even within Bolshevist Russia, the peasants will not give their wheat to the cities, since they get nothing from the cities in return. In the Petrograd and Moscow districts, suffering has been heightened by the Allied blockade.

In this way, a fair analysis of existing agricultural conditions with reference to relative production and exportation in both Ukraine and Russia proves the fallacy of the first argument advanced by those who interpose these conditions as a barrier to Ukraine's economic freedom. The irrefutable fact remains that, instead of depending upon the Ukraine for wheat, Russia not only has enough for her own use but, even during those years when the harvests in the east of Russia and in Siberia fail to reach their maximum, retains a sufficient surplus of grain to enable her to export it in considerable quantities.

The second objection, which involves the question of

The 15 % meadows and pastureland is a little lower than 311
the average for most European countries; this figure is higher for Polesya, the Carpathians and the foothills of the Caucasus (25—30 %); in the more intensively managed areas of the Right-Bank Region it sinks to 5 %. Ukraine (like Bohemia and Moravia) has only 7 % of land that cannot be utilised for agriculture or forestry, a proportion that is 16 % for Polesya alone. This figure is considerably higher for most European countries: Germany, Roumania, France and Italy have 12—19 %, USSR 17 %.

20 % of all plowed lands lie fallow, as, with the exception of some areas in the West, the three-crop rotation system is general. Grain takes up 76 % of the arable land, 90 % even in the steppe. Since the first World War this share has declined in favor of technical cultures which have doubled their pre-war area. In 1935 they accounted for 9 %; a further 8 % is used for other vegetation for food (potatoes), 7 % for fodder plants.

Wheat and barley are the two kinds of grain that are most 241
characteristic for Ukraine, though much rye is also grown. Its share (21 %) of the land laid down in grain and potatoes was in the years 1931—35 between that of wheat (32 %) and that of barley (13 %). Oats followed (10 %), then maize (9 %), millet (6 %) and buckwheat (3 %), potatoes (6 %). Rye is above all used for domestic consumption.

4. Grain: Areas of Production and Varieties

The biggest surpluses in grain are harvested in the old pro- 243 ●
vinces of Katerynoslav, Kherson, Tauria and the Kuban area, crops being wheat and barley and others. The proportion of these two varieties in the entire yield of grain decreases as we pass from south-east to north-west. In Western Ukraine, Volynia and the district of Tarnopil are areas of surplus yields while the rest of Galicia has to import grain. Wheat thrives best on the Black Earth of what was once steppe and occupies about 1/3 of the area laid down in grain and potatoes. Cultivation of wheat increased for a long time in accordance with the growing world consumption, but decreased when facilities for export disappeared and when domestic consumption became more important (see tables 1 and 2).

3: Mirchuk S-4 (no date) 1949 RDI Ukraine RDI

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Table 1. Ukraine in the World Production of Grain.

1909—13	Wheat	Rye	Barley	Oats	Total in Mill.
	in thousand t.				
East Ukraine	9 350	5 200	6 100	2 350	23
Russian Empire	20 500	19 000	9 000	13 500	62
Share of East Ukraine in %	48	30	72	17	37
West Ukraine	640	680	400	250	2
Ukraine total	9 990	5 900	6 500	2 600	25
World Production in Million t.	100	45	38	65	250
Share of Ukraine in %	10	13	17	3	10
1931—1935					
East Ukraine	9 100	5 420	3 720	2 230	20,5
Soviet Union	23 900	21 900	6 600	15 000	67,5
Share of East Ukraine in %	38	25	56	15	30
West Ukraine	1 020	1 530	680	870	4,1
Ukraine total	10 120	6 950	4 400	3 100	24,6
World Production in Million t.	127	46	39	62	274
Share of Ukraine in %	8	15	11	5	9

3: Mirchuk S-4 (no date) 1949 RDI Ukraine RDI

Table 2. Ukraine in the World Export of Grain.

1909—1913	Wheat		Rye		Barley		Oats		Total		Maize		Altogether	
	1000 t	%	1000 t	%	1000 t	%	1000 t	%	1000 t	%	1000 t	%	Mill. t	%
1. Ukraine	4300	20	600	21	2700	43	300	8,5	7900	23	700	10	8,6	21
2. Argentine	2600	12	—	—	—	—	620	17,5	3220	9,5	2950	40,5	6,1	15
3. USA	2960	13,5	10	0,5	160	2,5	60	1,5	3190	9,5	1020	14	4,1	10
4. Roumania	1430	6,5	100	3,5	350	5,5	150	4,5	2030	6	1000	14	3,1	7
5. Canada	2530	12	—	—	100	1,5	180	5	2810	8	—	—	2,8	6
6. Russian Empire	100	0,5	200	7	1000	16	800	23	2150	6	100	1,5	2,2	5
7. B. India	1380	6,5	—	—	230	3,5	—	—	1610	4,5	—	—	1,6	4
8. Australia	1150	5,5	—	—	—	—	—	—	1150	5,5	—	—	1,2	3
World	21500	100	2800	100	6300	100	3500	100	34100	100	7300	100	41,4	100
Share of Ukraine in %	20		21		43		9		23		10		21	
Russian Empire	4400	21,5	800	28,5	3700	58,5	1100	31	10000	29,5	800	11	10,8	26
Share of Ukraine in %	98		75		73		27		79		88		80	

243
439

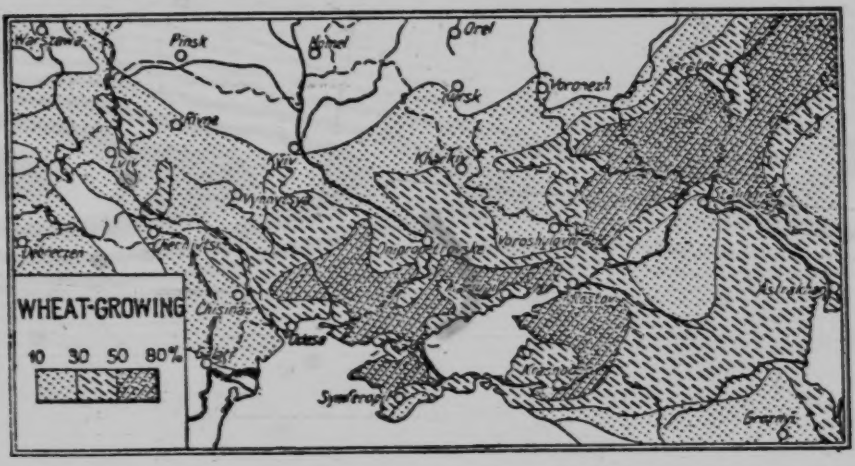
5. Other Agricultural Produce

244 433 In Western Ukraine potatoes account for 16—18 % of the arable land, decreasing towards the south-east to 3—2%. There has been a considerable increase in the cultivation of potatoes of recent times on the small property belonging to private or to collectivised peasants. The yield per ha which before World War I amounted to 92 q sank in the years 1929—1933 to 86 q (Belgium 213, Germany 156, France 110, USSR 80, USA 72). Its total production of 20.6 million t, 10 % of world production (205.6 million t in years 1931—35) puts Ukraine fourth after Germany, USSR (exclusive of Ukraine), and Polan' (exclusive of Ukrainian territory).

249 433 Sugar beet is the most important technical cultu.e. It is grown mostly in the center of Dnipro-Ukraine where the rainfall is 500 mm, above all in the area round Kyiv and in Podol.·. The average area planted in the years from 1901/02 to 1910/11 amounted to 555 000 ha and the total yield to 85 million t (154 q/ha). In 1935 Ukraine, with a sugar beet area of 952 000 ha, was the first country in the world as regards this product.

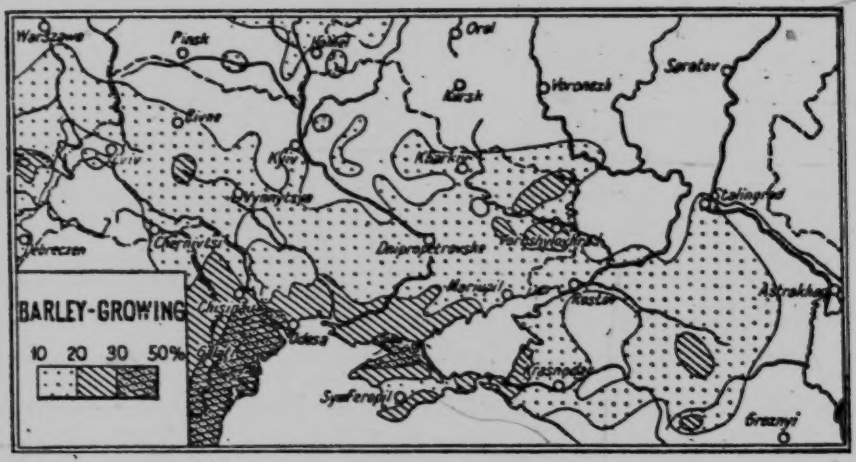
And yet the yields per hektar have decreased to 90 q, the average for 1931—35. In Germany the corresponding figure is 290 q/ha, in Denmark 322 q/ha, in Holland 350 q/ha, in the USSR

[243]



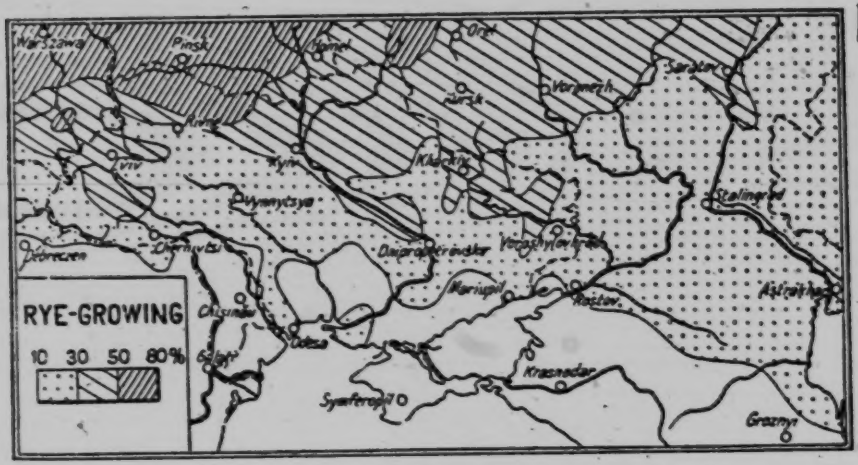
84 q/ha. The reason for the decrease is to be sought in the Soviet form of management. With an entire yield of 8.8 mil-

lion t and 14 % of the world production of sugar beet, Ukraine comes second after Germany (10.6 million t) and before France and the USA (8.2 and 8.1 million t respectively). 249 433



[243]

Conditions for growing tobacco in Ukraine are favorable, but the area planted, which in 1908 was 50 000 ha, has not been increased; the yield has risen slightly (8 000 t in the entire country). Better qualities were planted in the south, and elsewhere the well-known "makhorka". Hops of good quality were 249 433



[243]

grown in Volynia and partly also in Galicia; 2 000 t were harvested.

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433 Hemp is produced above all in the Chernyhiv area (229 000 ha), Ukraine coming after the USSR in hemp production of the world; in the years 1931—35 its fibre yield was 13 % (8 000 t)

[249]

and its seed yield 19 % (420 000 t) of the world production. Flax is grown on an area of 230 000 ha; Ukraine with a yield of 60 000 t stands second in world production of fibre flax (9.4 % of 640 000 t) while it is sixth as a producer of flax for seed, its yield of 71 000 t being 2 % of world production (3.5 million t).

• [243]

Cotton is produced on areas that shift from year to year, mostly without artificial irrigation; hitherto it has not been very successful (45,000t)

successful (45 000 t). Sunflowers were cultivated in 1935 on an area of 1 659 000 ha, mainly in the Kuban area. The yield for 1930—35 (0.9 million t) was only a little less than that of the USSR and much more than that of any other country.

As a grain producing country, Ukraine, with its yield of approximately 25 million t of the four main European varieties (= 10 % of world production), took a leading place in the years before the First World War (1909—1931). It exported 7.9 million t, or 1/3 of total world grain exports, topping the list for wheat and barley (4.3 million t and 20 % and 2.7 million t and 43 % respectively of world exports). In the years 1931—35, production in Ukraine decreased by only 9 % i. e. by 24.6 million t, world production amounting then to 276.6 million t, while the decrease in export trade in the same period was much greater. The reason for this was the small yield per hektar as well as inadequate cultivation in consequence of collectivisation and unfavorable conditions for seling agricultural and buying industrial products; in addition there was an increased demand at home as the country became more industrialised.

6. Cattle learing

The distribution of livestock in Ukraine varies considerably. In the wide spaces of North Caucasia there is much pasture-land so that there are not many cattle per unit of area, though quite a number per head of the population.

The opposite is true of Galicia where management is intensive. The many meadows of Poesya support good stocks of cattle while the mountain pasture of the Carpathians are not sufficiently utilised. Between those extremes we have the bulk of Ukrainian arable land with relatively poor supplies of fodder for cattle. The result is that Ukraine does not contribute to the cattle rearing industry of the word what one might expect from a country of its agricultural standng. Before World War I there were 13.5 million head of cattle in Ukraine, i. e. 2.8 % of world stock. The proportion of dary cows in this figure increases continuously as the use of oxen for draught, which used to be a characteristic feature of the country, had been declining for some time. (Table 3).

7:Bregy & Obolensky H-4, 5 (no date) 1940 RD1 Ukraine RD1

563 and the Greeks who competed with the merchant Jews in the great ports, where they formed very united and wealthy autonomous communities which to-day have been repatriated or dispersed.

II

Agriculture

241 Fundamentally an agricultural land, the Ukraine is particularly the land of cereals.

The incomparable richness of these lands, her temperate climate, and the aptitude of her population have made this branch of human activity the fundamental wealth of the country.

134 311 With the exception of the forest regions of the northwest, where sandy soil is met, nearly all the lands of the Ukraine are arable and actually only a few tens of thousands of hectares of waste land remain, which serve as natural pasturages and give an excellent hay which is very well suited for horses.

● 243 About 25,000,000 hectares are sown, of which 20,000,000 are growing cereals.

The abundance of nitrates in the surface layer of the earth, and its capillary structure, perfect for irrigation, allow the cultivation of the most valuable of cereals—

[311] wheat. The area that has been sown with this cereal occupies more than 35 per cent of the worked land of the Ukraine and its production rises to 90,000,000 quintals, representing almost 8 per cent of the world harvest and 18 per cent of the European harvest.

The cultivation of wheat seems to develop from year to year at the expense of barley and of rye, cereals of inferior quality.

From the end of the nineteenth century wheat has

243 experienced a great extension and has acquired an industrial and commercial character. Millions of hectares are sown with it, and a special selection of seeds has been undertaken for its development and for the production of new varieties which would resist drought, with a view to bringing about a stabilization of harvests. Considered best on the world markets for the production of fine flours and of nourishing bread, the well-known Russian 'hard corn' had, especially at the time immediately before the last war, a very good price in the world markets. Powerful elevators had been built in the ports of the Black Sea where the grain was stored before being loaded on the boats.

This crop occupies the great majority of the fields of Zone 2[1] where the lands are richer and suffice adequately for the increased production of this cereal. More than 4,000,000 hectares are producing wheat in this zone of a total of 6,500,000 in the whole Ukraine.

Farther to the north, and especially towards the relatively poor lands of Volynia and of the region of Tchernigov, rye, the production of which is as high as 30,000,000 quintals, begins to replace wheat, but it only serves, unlike the latter, to supply the internal consumption as it has not yet reached a level of export production.

Apart from wheat and rye, the Ukraine produces an important quantity of barley, about 35,000,000 quintals; of maize, 22,000,000 to 25,000,000; of oats, 20,000,000; and finally great quantities of buckwheat and millet.

Wheat, the harvest of which can easily reach 100,000,000 quintals and more, is an excellent export commodity.

Its extensive exploitation had not only benefited the great landowners, but equally the average farmers who have the good sense to increase their revenues by

1 [See category 116, pp. 139-140. --- Analyst]

7:Bregy & Obolensky H-4, 5 (no date) 1940 RD1 Ukraine RD1

applying improved methods of working and in engaging 243 ●
in a selection of varieties as demanded by the mills and the exporters.

The State and local organizations equally try to come to the aid of the cultivators in order to improve the quality and raise the production of this precious grain.

The Soviet State, wishing to substitute itself for all [474] former capitalist enterprises, organized the *sovkhoses* (State agricultural enterprises), where it tried to return to the pre-war traditions of exploitation. The general system of Soviet economy does not, however, permit the organization of the exploitation of wheat on a commercial scale. The figures which we have just cited cannot be applied to the Soviet Ukraine in its present state. Actually agricultural decadence during the Civil War and the period of militant communism and the collectivization of the peasants had disorganized all that which had been done during the preceding epoch for the rational exploitation of this important resource. The widespread utilization of tractors has not yet compensated for the losses which have been sustained. Nevertheless wheat remains and will remain the essential product of Ukrainian soil. It is its most important agricultural potential.

Although the cultivation of maize, almost entirely concentrated in Zone 2, only occupies the fourth place among the cereals of the Ukraine, its importance is great owing to the fact that this country alone produces 65 per cent of the maize of the Soviet Union. On the other hand this crop is a very recommendable phase in the enrichment of the soils, whose supply of water and chemical salts is pitilessly exhausted by the growing of wheat, more so, as in order to replace them the utilization of manure in the southern regions sometimes presents a certain danger owing to the possible droughts.

2/n [See category 116, pp. 139-140 --- Analyst]

7:Bregy & Obolensky H-4, 5 (no date) 1940 RD1 Ukraine RD1

243 Quite recently one has experimented in the Ukraine with two crops formerly unknown in that country—soho and rice—which have given good results. The experience is especially interesting in the case of rice, a very important cereal unknown in Europe, except in Italy, and the cultivation of which may well open new agricultural perspectives.

. . . . .

249 Beside the cereals, the most important sown surface (2,500,000 hectares) is occupied by the so-called technical cultivations, the products of which serve as raw materials in industry, both food and general.

These are the sugar-beet, oil-bearing plants, linseed, hops, and tobacco. The beet, the sown surface of which covers nearly 1,000,000 hectares, occupies the predominant place.

This cultivation expects concentrated exploitation by the great enterprises, furnished by an appropriate agricultural organization and abundant labour, in order to give big harvests.

Thus, before the advent of the Soviet regime, the harvest of beet in the Ukraine reached 150,000,000 quintals, representing nearly 18 per cent of the world's production. At present, notwithstanding the increase of the utilized surface, the harvest only reaches a maximum of 110,000,000. This diminution must be considered as being temporary and solely due to the new system of State capitalism which cannot fully replace private initiative.

One cannot, however, expect a new increase of production in this direction because the cultivation of sugar-beet exhausts the land, hinders the rational system of agricultural exploitation, and requires an enormous outlay on chemical manure, which has to be set off as a

249 are known under the name of '*makhorka*.' Fine tobacco is only cultivated in the southern region, near the Crimea, and only in small quantities.

243 As to hops, they are spread over the relatively poor lands of Volynia. Since the end of the nineteenth century this crop has experienced a great development in the Ukraine, which has furnished more than 50 per cent of the hops on the markets of the Russian Empire. This, as is well known, is an indispensable product in the manufacture of beer.

Owing to their utilization in the breweries oats can equally be considered as being not only a direct food crop. This would also apply to a part of the potato harvest (total of 1·2 million hectares), which supplies the most important material for the production of alcohol.

248 The cultivation of cotton which was begun five or six years ago in the extreme south of the Ukraine, between the mouth of the Dnieper and the isthmus of Perekop, is a recent industry. We have little information about its possible future and cannot dwell on it. Actually cotton plantations occupy about 150,000 hectares. The employment of a new variety, called the 'non-irrigated cotton,' seems to give satisfactory results.

241 In all that concerns agriculture, the division into agro-climatic zones seems to be entirely justified.

Actually the northern limit of the cultivation of maize and sunflower corresponds almost entirely to the border between these two zones. On the other hand 95 per cent of the land occupied by sugar-beet is to be found in the southern part of Zone 1.[1] This separation is also not quite so definite for the cultivation of cereals, but nevertheless it exists. The greater amount of wheat is grown in Zone 2.[2] Rye and oats, on the contrary, occupy a greater surface in the north. In the case of the two less important cereals, buckwheat and millet, the separa-

1 [See category 116, pp. 139-140.—Analyst]

appointed their own people though without scientific merits, but politically faithful to Moscow.

The economic and national oppression of Ukraine was felt also by the Ukrainian Communists. They saw the pernicious results of forced collectivisation in Ukraine. The Ukrainian peasants, though terrorised by executions and deportations, had no desire to work for the Soviet dictatorship. In 1931/32 the plan for the delivery of grain for the Soviet state was not carried out in Ukraine. The cultivation area was disastrously diminished. But Moscow's demands on Ukraine grew steadily. In summer 1932, Molotov and Kaganovich arrived in Ukraine from Moscow in order to demand from the Communist organisation in Ukraine the increase of grain delivery. At a Party conference in Kharkov the Commissar of Education Skrypnyk declared that in Ukraine all had been 'swept out' and that in the villages there was a great want of food. With Skrypnyk's view the majority of the members of the Communist Party in Ukraine agreed, and therefore it was decided in Moscow to make a radical 'purge' among the Ukrainian Communists.

5. *Moscow's Terror against the Communist Opposition in Ukraine*

The Central Committe of the Communist Party of the Soviet Union passed a resolution of non-confidence in the leaders of the CP of Ukraine on January 24, 1933, and 'strengthened' the directory of the Communist Party in Ukraine with Stalin's agents, headed by Postyshev. Postyshev directed the repressions, particularly against Communists of Ukrainian nationality. By arrests and executions of Ukrainian Communists Postyshev wanted to terrorise the entire Ukrainian population which was listening to the opposing attacks of the Ukrainian Communists against the policy of Moscow. Postyshev carried out a massacre of Communists coming from Western Ukrainian territories, which at that time belonged to Poland, Czechoslovakia and Rumania (Galicia, Volhynia, Bukovina, Carpatho-Ukraine). Many of them were declared without any reason 'agents of foreign Fascism' and shot without trial — Badan, Maksymovych, Sydorak, Mondok, the last two members of the Czechoslovakian Parliament, and many others.

During this bloody purge the 'old Bolshevik', Lenin's companion from the days of the Soviet revolt in Petersburg in 1917, Commissar of Education in Ukraine from 1027—1933, Mykola Skrypnyk, perished. Skrypnyk was accused of 'nationalist' deviations, for he thought that the national problem was not worked out sufficiently in Communist theory, and for this reason himself investigated the

9: Prothero G-4 (no date) 1920 RD1 Ukraine RD1

467 missionaires, dock and wharf labourers, outdoor servants, &c. The members of *artels* in the second group always receive employment in preference to other workers, as their trustworthiness is guaranteed by the *artel*, and the fact of their membership is some guarantee that they are efficient.

The *artels* are democratic and useful institutions, and, in a country where promptness and trustworthiness are somewhat rare qualities, they play a most valuable part in giving a measure of confidence and security to both employers and workmen.

(2) Agriculture

(*a*) *Products of Commercial Value*

243 The agricultural industry is the largest in the Ukraine, and employs the great majority of the [134] population. The black-soil region extends over most of the area, only the Governments of Kiev, Podolia, and Chernigov, and the borders of the Black Sea, lying [433] outside it. It follows that the suitability of the Ukraine [431] for cereals is equal to that of any part of the world, and its surplus crops form a considerable proportion of the world's food-supply.

243 433 The mean area under cultivation in the period 1901–5 was 52,000,000 acres, producing 20,700,000 tons annually. Of this total, 45,600,000 acres were under breadstuff crops, and produced 15,000,000 tons. For the year 1914, the figures were 56,300,000 acres, producing 23,000,000 tons. Of this 50,400,000 acres were under breadstuff crops, with a return of 15,900,000 tons.

243 439 *Rye* is the principal crop, and is produced on the peasants' lands more largely than any other cereal. It is the staple breadstuff of the country, and the internal consumption absorbs a large part of the crop, a minor quantity only being exported. In some years the crop is not sufficient for the home demand, and the peasants have to use imported flour or substitutes.

Wheat is next in importance, and provides the largest surplus for export. It is mainly grown on

9: Prothero G-4 (no date) 1920 RD1 Ukraine RD1

privately-owned lands. The failure or success of the Ukraine wheat harvest has its effect upon the corn exchanges of the whole world, and its shipment from the Black Sea is the occasion of much anxiety and speculation every season.

Barley is largely grown and exported, being principally raised on privately-owned land. *Maize* comes next in value; the greater part of the crop is consumed locally, but a moderate quantity is exported in good years. The *oat* crop is valuable, and a proportion remains for export after the supply of local needs. *Millet* and *buckwheat* are grown for local use.

Of the non-cereal crops, *potatoes* take the first place, exceeding all others by a large margin. They are used not only for food and the manufacture of potato flour, but for the distillation of spirits, a flourishing industry in many districts. Small crops of *peas*, *beans*, and *lentils* are also grown.

The *sugar-beet* is raised in great quantities, especially in the governments which have not the black soil. Kiev produces most, Podolia and Kharkov come next; the remaining Governments have only small crops, and Taurida and Yekaterinoslav none. There is usually a large surplus of refined sugar for export, in addition to a valuable internal trade in sugar and manufactures thereof; the by-products of cattle food and spirit distilled from molasses increase the value of this crop.

Tobacco used to be widely cultivated except in the black-soil zone, but its cultivation is steadily decreasing everywhere. It still remains important in the Governments of Poltava and Chernigov. Only the coarsest qualities are raised, the leaf being known as *makhorka* and used solely by peasants and labourers.

Volhynia grows a large quantity of *hops*, about half the total yield of all Russia. The product is mostly sold locally, but occasionally a surplus is exported to the Warsaw market.

The *grape vine* is cultivated in Podolia, Kherson, and Yekaterinoslav. The wine produced is of inferior quality, and has only a local market.

Of the crops producing vegetable oils, *linseed* and

241 It is almost unbelievable that in many regions of the steppe the planted surface is not ploughed up, or in any case only superficially with a land-parer. The purpose is to conserve soil moisture. Often the entire sowing, the entire spring work of the farmer consists of a single process. A light land-parer scratches the surface; it has a box attached to it containing the seed, and the harrow is attached to this "ploughing and sowing machine". With this type of sowing one necessarily reaps a lot of weeds.

•243 438 Nevertheless, before the war the Ukraine enjoyed the reputation of being a granary. During the years 1909 to 1913 the country produced on an average of 8.6 million more tons of grain annually than it consumed. The annual export amounted to /144/ an average of 4.3 million tons of wheat alone and 2.7 million tons of barley. (87) Surplus and export dropped considerably

87. Kubiyovich: Geography of the Ukrainian and Bordering Areas, page 390.

under Bolshevik rule. In 1934 only one million tons of grain were exported.

*

425 669 In 1917, when the Bolsheviks became active, the general feeling in North and Central Ukraine was extremely favorable to an agrarian revolution. The land-hungry peasants were deeply convinced of the fact that the "right of the landowner was an injustice". Whoever promised the peasants that they were to receive all the land they could themselves cultivate, had won them over to his cause. As a matter of fact, in 1917, at the beginning of the revolution, the lands of the estate owners and the large farmers were immediately divided up, in the process of which the estates often went up in flames and